Jeremy Kleve

Software Engineer

SUMMARY

Programmer with 4+ years of business level programming experience and 7+ years as a hobby game developer. I pride myself in taking the initiative and solving problems early on, working on projects from the design phase all the way through to delivery and beyond, providing exemplary support to clients and teammates, and continuously learning new skills. Programming and game development is much more than just a career for me, it is a passion.

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SKILLS

- **Languages:** C/C++, C#, Javascript, Lua, HTML / CSS
- **Frameworks:** .Net Core, ASP.NET, ASP.NET Core, Blazor, gRPC
- **Libraries/APIs:** DirectX, OpenGL, Dear ImGui, SQLite
- **Software:** Visual Studio 2019, Visual Studio Code, Eclipse, Git, Blender, Unix/Linux
- **Game Engines:** Unity, Unreal 4, Godot
- **Modding:** Assetto Corsa and BeamNG
- **Non-technical:** Project management, teamwork, self-motivated learning

EDUCATION

California Polytechnic University
Pomona, CA
B.S. Computer Science
2016 - 2018

Mt San Antonio College
Walnut, CA
transferred
2014 - 2016

WORK EXPERIENCE

Game Programmer // **Sigma Integrale**, Pomona, CA
May 2018 - May 2022

- Participated in a team of cross-discipline engineers developing vehicle simulator systems for auto industry clients including Dodge, Volkswagen, Kia and more.
- Managed software project timelines and deliverables including maintenance and client support.
- Developed interactive and automated attractions for auto show events using the Unity game engine.
- Developed the DK motion system from concept to production, providing motion haptic feedback for professional racing simulators.
- Created and maintained server/client software to host websites, collect data, manage event participants, and remotely controlled software through webUI.
- In-game modding for various simulator software including 3D modeling of vehicles and objects, tuning physics engine models, and scripting of game scenario logic.
- Separated business logic and UI views through Model-View-ViewModel software design principles.
- Created inter-process-communication layers between applications using gRPC streams and shared memory to optimize efficiency and debugging.

PROJECT HIGHLIGHTS

DK Motion System // Sigma Integrale, Pomona, CA

- Designed and developed a modular MVVM desktop application using the Dear ImGui C++ UI library and companion webUI using C# with Blazor webassembly.
- Created controller system to launch and communicate with various DK Motion background applications and display their status in UI.
- Developed a modular profile builder to facilitate adding and removing motion controls.
- Created build tools to improve workflow and reliability including an SHA256 file hasher to facilitate updates to webroot folders.
- Built in automated features such as game detection for automatic profile switching.
- Obfuscated proprietary logic from C# to C on embedded microcontrollers
- Participated in R&D during the selection of microcontrollers and firmware development.
- Implemented collection and processing of game physics data from title such as F1 2020, Dirt Rally 2, iRacing, Assetto Corsa and many more to convert into actuator movement in real time with possible average total system latency of 9-72 ms dependent on smoothing levels.

Waste Management Truck Simulator // Sigma Integrale, Pomona, CA

- Developed to client specification, a series of training scenarios built in BeamNG that included an inspection of a damaged 3D Peterbilt truck, truck operational tutorial for picking up dumpsters, and missions to drive around a virtual world to pick up dumpsters.
- Major components included mission state machines, truck and dumpsters JBeam and physics modelling to facilitate actual physics based dumpster pickups, collision triggers, 3D modeling, PBR material and texture editing, creating HTML/CSS UI elements.

KIA Telluride and Stinger Simulators // Sigma Integrale, Pomona, CA

- Developed to client specification, an interactive and automated racing simulator attraction for the industry auto show circuit to represent KIA.
- The system features a cinematic attract loop and leaderboard display built with Unity and features a custom web app to register and manage event participants.

Augmented Realms // E-STEM Project - Cal Poly, Pomona, CA

- Participated on a cross-discipline product development team, represent Cal Poly at the 2018 United State Science and Engineering Festival (USESEF).
- Implemented Google ARCore to visualize 3D game worlds to aid in tabletop roleplaying games.
- Outcome: Learned how to implement various AR features within the Unity game engine including Plane detection, marker tracking, anchors, and accelerometer and touch controls.

Red Dwarf, VR Spaceship Simulator // Game Development Course Work - Cal Poly, Pomona, CA

- Managed a team of classmates to design and develop a VR Spaceship experience that had you rely on the VR controllers raycast and trigger button to simulate physical interactions inside the cockpit.
- Contributed to design documentation, spline pathing, 3D modeling, 3D radar system, and ship control mechanics and inputs.
- Implemented a procedural generator to create spherical voxel planets that were destructible.
- Outcome: Learned how to manage a team and its resources and procedural mesh generation.

Unity Editor Tools // Hobby Project

- Development of Unity Editor extensions to provide custom functionality for 3D tilemap editors.
- Outcome: Learned about quaternions, world to screen space projections, object pooling and various 3D math, mesh and graphics problems, and how to extend the editor to add new functionality.